

ultraviolet [parallel] beams are formed by [the] a higher harmonic wave of an excimer laser or a YAG laser.

A2

Concl.

REMARKS

Claims 1-3 and 5-15 are pending, with Claims 1 and 6 being independent.

Claims 1-3 and 5-15 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite.

The claims have been carefully reviewed and amended as to matters of form. It is believed that they conform fully to the requirements of Section 112, second paragraph, including the points raised in paragraph 6 of the Office Action. Therefore, withdrawal of the rejection under Section 112, second paragraph, is respectfully requested.

Claims 1-3, 6-10, and 15 were rejected under 35 U.S.C. § 102 as being anticipated by *Nishiwaki et al.* (U.S. Patent 5,263,250). Claims 5, 11, and 12 were rejected under 35 U.S.C. § 103(a) as being obvious from *Nishiwaki '250*. Claims 13 and 14 were rejected as obvious from *Nishiwaki '250* in view of *Muto* (U.S. Patent 5,548,894).

Claim 1 is directed to a method for processing an ink discharge port of an ink jet head provided with discharge

ports for discharging ink, the discharge ports being provided on a discharge port plate.

The method of Claim 1 includes closely contacting a mask plate having openings corresponding to the discharge ports with a face of the discharge port plate on an ink discharge side. The method further includes forming the discharge port on the discharge port plate by irradiating plural high energy ultraviolet beams simultaneously through the mask plate in directions that are inclined with respect to a vertical axis that is perpendicular to the mask plate. The discharge port widens in a direction away from a source of the beams.

Among the advantages provided by these features is that the discharge ports have tapered shapes that improve discharge efficiency. In addition, because the ports are formed from the discharge side, the discharge plate need not be processed separately from the rest of the ink jet head.

Nishiwaki '250 relates to forming openings in a nozzle plate of an ink jet head. As shown in Fig. 3, Nishiwaki '250 forms the openings by positioning a mask (14) at some distance away from the nozzle plate (12), rather than by closely contacting a mask plate having openings corresponding to the discharge ports with a face of the

discharge port plate, as recited in Claim 1. *Nishiwaki* '250's mask is positioned in back of the nozzle plate (12), rather than on an ink discharge side, as further recited in Claim 1. *Nishiwaki* '250's openings widen in a direction toward the source of the beams, rather than in a direction away from the source of the beams, as further recited in Claim 1. Applicants submit that nothing in *Nishiwaki* '250 would teach or suggest these mentioned features of Claim 1.

Accordingly, Claim 1 is believed to be allowable.

Independent Claim 6 recites features similar to those discussed above and is therefore believed to be allowable for at least the same reasons.

A review of the other art of record, including *Muto*, has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or the other of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the

individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

  
\_\_\_\_\_  
Attorney for Applicants

Registration No. 29,286

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200